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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/760,181	01/21/2004	Kia Silverbrook	MPA33US	2065
24011	7590	11/15/2005		
SILVERBROOK RESEARCH PTY LTD 393 DARLING STREET BALMAIN, 2041 AUSTRALIA			EXAMINER GOLDBERG, BRIAN J	
			ART UNIT 2861	PAPER NUMBER

DATE MAILED: 11/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/760,181	SILVERBROOK ET AL.	
	Examiner	Art Unit	
	Brian Goldberg	2861	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 7 is/are rejected.
- 7) ☒ Claim(s) 5 and 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>11/3/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

Drawings

1. The drawings are objected to because Figure 17C is referenced in the specification on page 13 line 27, page 15 line 7, page 17 line 34, page 18 line 24, and page 22 line 28. This was already brought to your attention in the Pre-Exam Formalities Notice mailed 4/23/2004. Also, the drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: fluid distribution stack 500, and possibly others. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

1. Claim 7 is objected to because of the following informalities: It is not fully clear from the specification what is meant by "fluid distribution member", since this phrasing is not used within the body of the specification. Also, it is not clear what "respective ones" is referring to in the second to last line of the claim. Appropriate correction is required.
2. Claims 3 and 7 are objected to as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 3 recites the limitation "the other end" in the second to last line of the claim. There is insufficient antecedent basis for this limitation in the claim. Claim 7 recites the limitation "the electrical connector" in line 3 of the claim. There is insufficient antecedent basis for this limitation in the claim. Claim 7 also recites the limitation "the fluid distribution members" in the last two lines of the claim. There is insufficient antecedent basis for this limitation in the claim, since it is only referred to in the singular as "at least one fluid distribution member" prior to this reference.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical

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Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000.

Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Cannon.

Cannon discloses "a printed circuit board (120 of Fig 3) comprising an integrally formed spring portion (180 of Fig 3)."

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cannon in view of Tomura et al. Cannon discloses the claimed invention as set forth above with respect to claim 1. Thus Cannon meets the claimed invention except "wherein the integrally formed spring portion is formed by removing a section."

7. Tomura et al. teach providing a spring portion "formed by removing a section (Figs 27A and 27B)." It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to provide a spring portion formed by removing a section. One would have been motivated to so modify Cannon by using the spring

portion discloses by Tomura et al. for the benefit of reducing the materials required for the printed circuit board as well as reducing its weight.

8. Claims 3, 4, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Silverbrook et al. in view of Cannon. Silverbrook et al disclose "a plurality of first printed circuit boards arranged in a linearly aligned manner (18 of Fig 4); a second printed circuit board (22 and 48 of Fig 8) arranged at one end of the linearly aligned first printed circuit boards for connecting electronics supported by the plurality of first printed circuit boards to power and data supplied (col 2 ln 56-58); and a third printed circuit board (54 of Fig 3) arranged at the other end of the linearly aligned first printed circuit boards...at least one printhead module (10 of Fig 3) comprising at least two printhead integrated circuits (18 of Fig 4), each of which has nozzles formed therein for delivering printing fluid onto the surface of print media (pg 5 ln 19), a support member (16 of Fig 3) supporting and carrying the printing fluid for the at least two printhead integrated circuits, and an electrical connector (48 of Fig 8) for connecting electrical signals to the at least two printhead integrated circuits (pg 3 ln 17); a casing (14 of Fig 3) comprising a support frame (64, 94 and 32 and 76 about 16 of Fig 2) on which the at least one printhead module and the circuit assembly are removable mounted...the at least one printhead module (10 of Fig 2) is formed as a unitary arrangement of the at least two printhead integrated circuits (18 of Fig 4), the support member (16 of Fig 7), and at least one fluid distribution member (26 of Fig 7) mounting the at least two printhead integrated circuits to the support member; and the support member has at least one longitudinally extending channel (80 of Fig 7) for carrying the printing fluid for the

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printhead integrated circuits and includes a plurality of apertures (42 of Fig 7) extending through a wall of the support member arranged so as to direct the printing fluid from the at least one channel to associated nozzles in both, or if more than two, all of the printhead integrated circuits by way of respective ones of the fluid distribution members (see Fig 7 and pg 5 In 19).” Thus Silverbrook et al. meet the claimed invention except “the third printed circuit board being a printed circuit board in accordance with claim 1” and “a circuit assembly according to claim 3.”

9. Cannon teaches “a printed circuit board in accordance with claim 1” as set forth above with respect to claim 1. Thus the Cannon and Silverbrook et al. combination satisfies “a circuit assembly according to claim 3” as set forth above. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to provide “a printed circuit board comprising an integrally formed spring portion.” One would have been motivated to so modify Silverbrook et al. by substituting the printed circuit board disclosed by Cannon in place of the third printed circuit board disclosed by Silverbrook et al. for the benefit of ensuring that electrical contacts are maintained due to the force provided by the spring as stated by Cannon.

Allowable Subject Matter

10. Claims 5 and 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of allowable subject matter: The prior art does not disclose or suggest “the second and third printed circuit boards of the circuit assemble being arranged at the

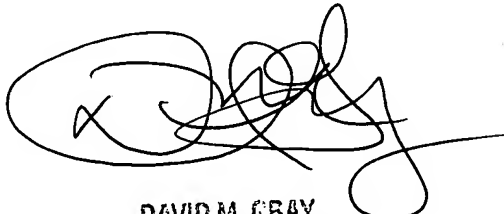
respective longitudinal ends of the support frame" in combination with the remaining claim elements as set forth in claim 5 and dependent claim 6.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Goldberg whose telephone number is 571-272-2728. The examiner can normally be reached on Monday through Friday, 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Gray can be reached on 571-272-2119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BJG



DAVID M. GRAY
PRIMARY EXAMINER